CLAIMS

1. An intermediate network device for use within a computer network having a server configured to provide one or more data streams to a client, each stream having a corresponding bandwidth, the network device comprising:

means for determining network traffic characteristics sufficient to identify a stream from the server to the client;

means for determining the bandwidth of the stream; and

a resource reservation protocol (RSVP) transmitter proxy configured to reserve resources within the computer network on behalf of the server for allocation to the stream.

2. The intermediate network device of claim 1 wherein the RSVP transmitter proxy is configured to generate and send one or more RSVP Path messages on behalf of the server, the one or more RSVP Path messages containing the network traffic characteristics and the bandwidth of the stream.

3. The intermediate network device of claim 2 wherein the RSVP transmitter proxy is configured to terminate RSVP Reservation (Resv) messages that are sent to the server.

4. The intermediate network device of claim 3 wherein the RSVP transmitter proxy is configured to generate and send one or more RSVP Path Teardown (PathTear) messages on behalf of the server for releasing the reserved resources allocated to the stream.

5. The intermediate network device of claim 3 wherein the RSVP transmitter proxy is configured to generate and send one or more RSVP Path Teardown (PathTear) messages on behalf of the server for releasing the reserved resources allocated to the stream.

6. The intermediate network device of claim 1 wherein the means for determining the network traffic characteristics is a packet classification engine that is configured to snoop on messages exchanged between the server and the client.

7. The intermediate network device of claim 6 wherein the means for determining the stream's bandwidth is the packet classification engine.

8. The intermediate network device of claim 7 wherein the packet classification engine is configured to snoop on Real-Time Streaming Protocol (RTSP) messages in order to determine the network traffic characteristics and the bandwidth of the stream.

9. The intermediate network device of claim 8 wherein the packet classification engine is configured to extract the bandwidth of the stream from one or messages whose contents are organized at least in part in accordance with the Session Description Protocol (SDP) specification standard.

10. The intermediate network device of claim 9 further comprising a session manager configured to store the network traffic characteristics and bandwidth of the stream.

11. The intermediate network device of claim 10 wherein the stream has an RTSP state and the session manager includes one or more state machine engines configured to maintain the RTSP state of the stream.

12. The intermediate network device of claim 2 wherein

the client has a network layer address and a transport layer port for use in receiving the stream from the server,

the server has a network layer address and a transport layer port for use in sending the stream to the client, and

the network traffic characteristics include the client's network layer address and transport layer port and the server's network layer address and transport layer port.

13. The intermediate network device of claim 12 wherein
the stream uses a given transport layer protocol, and
the network traffic characteristics include the given transport layer protocol.

14. The intermediate network device of claim 13 wherein the RSVP Path messages generated and sent by the RSVP transmitter proxy on behalf of the server include a session object containing the client's network layer address and transport layer port and the transport layer protocol associated with the stream.

15. The intermediate network device of claim 14 wherein the RSVP Path message includes a sender template object containing the server's network layer address and transport layer port associated with the stream.

16. The intermediate network device of claim 15 wherein the RSVP Path message includes a sender Tspec object containing the bandwidth of the stream.

17. The intermediate network device of claim 2 further comprising means for obtaining a differentiated services codepoint (DSCP) value that is based on the bandwidth of the stream.

18. The intermediate network device of claim 17 wherein the RSVP transmitter proxy is configured to load the DSCP into the RSVP Path message generated and sent on behalf of the server.

19. The intermediate network device of claim 18 wherein the RSVP Path message includes a DCLASS object containing the DSCP.